



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,593	01/13/2006	Stephen William Sankey	DTG1-127US	1797
31344 7590 09/14/2010				
RATNERPRESTIA				
P.O. BOX 1596				
WILMINGTON, DE 19899				
EXAMINER				
KASHNIKOW, ERIK				
ART UNIT		PAPER NUMBER		
1782				
MAIL DATE		DELIVERY MODE		
09/14/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,593

Applicant(s)

SANKEY ET AL.

Examiner

ERIK KASHNIKOV

Art Unit

1782

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28, 31, 33-43 and 45-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28, 31, 33-34 and 45-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/13/10 has been entered.

Claim Objections

2. Claims 23, and 41-43 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim the claims depend upon two different claims (such as claims 12 and 22 for claim 43). See MPEP § 608.01(n).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10, 12-15, 20-24, 27, 28, 31, 33, 34, 36, 41, 43 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000).

In regards to claims 1, 3, 6, 7, 28 Jacques teaches a film attached to a container wherein the film comprises at least one perforated layer and an unperforated layer (claim 1). Jacques teaches that the unperforated layer be comprised of PET, one of the instant inventions' preferred polyesters (column 4 lines 4-7). Jacques regards to teach that the unperforated inner layer may be 0.5 mil thick (12.7 μm) (column 5 lines 9-11), while the present claims require 12 μm .

It is apparent, however, that the instantly claimed amount of 12 μm and that taught by Jacques are so close to each other that the fact pattern is similar to the one in In re Woodruff, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of 12.7 μm disclosed by Jacques and the amount disclosed in the present claims, it therefore would have been obvious to one of ordinary skill in the art that the amount of 12 μm disclosed in the present claims is but an obvious variant of the amounts disclosed in Jacques and thereby one of ordinary skill in the art would have arrived at the claimed invention.

Further with regards to the thickness of the unperforated layer, it is taught that the layer be very thin (column 3 lines 25-35) and as such absent a showing of criticality with respect to "layer thickness" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "layer thickness" through routine experimentation to values, including those presently claimed in order to achieve "optimal heat sealing and venting properties". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. In regards to claims 2, 23 as the unperforated layer is made of the same material as the instant invention and the same thickness it must necessarily be permeable to gaseous water and oxygen.
6. In regards to claim 5 as there is no limitation as to which surface of the perforated layer is the first or second the examiner picks the surface that the unperforated layer is attached to as the first surface.
7. In regards to claims 12, 13 and 43 Jacques teaches that the perforated layer may comprise PET (table column 7 and 8).
8. In regards to claim 14 Jacques teaches that the substrate layer is comprised of PET and further teaches that Pet is heat sealable (column 4 lines 4-7).
9. In regards to claim 15 Jacques teaches that the substrate layer has a second perforated layer attached thereon (Fig. 1 column 3 lines 47-58) and further teaches that the layer may be heat sealable (column 7 lines 1-5, PET).

10. In regards to claim 22 Jacques teaches that the film is formed by perforating the carrying layer and top layer then providing an unperforated layer thereon (column 3 lines 40-60).

11. In regards to claims 24 and 27 Jacques teaches that the unperforated layer is extruded to the perforated layer (column 3 lines 40-60 and column 5 lines 50-60) It is further noted that the broadest definition of the term laminated is "to make by uniting several layers" (<http://dictionary.reference.com/browse/laminate>).

12. In regards to claim 31, 33, 34 and 36 Jacques teaches that the film may be formed to a lid and sealed to a container (claim 1).

13. In regards to claim 46 Jacques does not teach that the heat seal layer fills the perforations.

14. While Jacques teaches the laminated film with a perforated and an unperforated layer they are silent with regards to what containers with said film as a lid contain, the density of perforations as well as diameter of the perforations.

15. In regards to claims 1, 4, 8-10, and 47 Lin teaches a dual layer film comprising one layer that has been perforated and one layer that has not been perforated (page 3 lines 35-32). Lin teaches that the perforated layer may comprise polyethylene terephthalate (hereinafter PET) In regards to Applicant's arguments concerning the size and density of the perforations it has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already

generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In re Antonie*, 559 F.2d 618, 620 (CCPA 1977)).

Therefore absent a showing of criticality with respect to " thickness of the film layers and the size and density of the perforations " (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the " thickness of the film layers and the size and density of the perforations " through routine experimentation to values, including those presently claimed in order to achieve "a package which finely controls the final condition of that packaged therein (page 14 lines 22-30)". It is noted that as Jacques and Lin uses the same materials as those preferred by applicants the film must necessarily have the same water vapor transmission rate. It is noted that in regards to claim 47 the optionally perforated heat seal layer is not included.

16. In regards to claims 20, 21 and 45 Lin et al. teach that it is preferable that the film is transparent, and therefore would have a light transmittance at or near 100% (page 12 lines 26-32), it would be obvious to one of ordinary skill in the art at the time of the

invention to limit the haze in transparent sections in order to provide a clear view of the item packaged, this would include embodiments below 6%.

17. In regards to claims 22 and 41 Lin and Jacques previously taught all the limitations associated with the article and further teaches that the film is formed perforating the layer then adding the other layers (page 4 lines 1-14).

18. In regards to claim 34 while Lin does not specifically mention that the containers contain cut plants, they do specifically mention that the containers are to hold foodstuffs, of which fruits and vegetables are common food items that are also cut plants (page 13 lines 30-32).

19. In regards to claim 36 Lin teaches that the container may be used for foods that are cooked in a microwave oven (page 14 lines 1-15).

20. In regards to claim 46 Lin teaches that it is not the material of the barrier layer but rather a sealing layer that fills in the perforations, therefore 0% of the perforations are filled by the unperforated barrier layer (page 3 lines 26-32).

21. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Jacques with that of Lin because the invention of Lin offers the ability to form a package which finely controls the final condition of that packaged therein (page 14 lines 22-30).

22. Claims 11 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Rogers (US 4,918,156).

23. As stated above Jacques and Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding using copolyesterether as the substrate.

24. Rogers teaches polyester resins which offer improved processability during manufacture (column 1 lines 5-6).

25. Rogers teaches that this polyester is a copolyesterether formed from 1,4-cyclohexanedimethanol (column 1 lines 5-10).

26. One of ordinary skill in the art at the time of the invention would be motivated to modify the package of Jacques and Lin with the polyester of Rogers, because the polyester of Rogers offers improved processability during manufacture (column 1 lines 5-10) and a decrease in film splitting (column 2 lines 49-50).

27. Claims 16, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Dominguez De Walter et al. (US 6,787,630 and hereinafter Dominguez).

28. As stated above Jacques Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding the heat sealable layer comprising ethylene glycol, terephthalic and isophthalic acid.

29. Dominguez teaches heat stable polyesters which are easily reproduced (column 1 lines 7-10).

30. In regards to claim 16 Dominguez teaches copolyesters derived from ethylene glycol, and terephthalic and isophthalic acid (column 13 lines 1-10). In regards to the

concentrations it has been found that absent a showing of criticality with respect to "acid ratios" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "acid ratios" through routine experimentation to values, including those presently claimed in order to achieve "polyesters with good color, and reduced degradation". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

31. One of ordinary skill in the art at the time of the invention would be motivated to modify the package of Jacques and Lin with the copolyester of Dominguez because the copolyester of Dominguez offers outstanding clarity and coloring neutrality (column 1 lines 15-16).

32. Claims 17, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and McConnell et al. (US 4,450,250).

33. As stated above Jacques Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding a copolyester derived from ethylene glycol, terephthalic acid and cyclohexanedimethanol.

34. McConnell et al. teach adhesive polymers.

35. In regards to claim 17 McConnell et al. teach a known adhesive polymer which is derived from ethylene glycol, terephthalic acid as well as 1,4-cyclohexanedimethanol (column 3 lines 51-60).

36. One of ordinary skill in the art at the time of the invention would be motivated to modify the film of Jacques and Lin with the polyester adhesive of McConnell et al. because the adhesive composition of McConnell et al. which is well known in the art offers an ability to bind to a wide variety of materials as well as offering good cohesive and bond strengths and improved processing characteristics (column 1 lines 11 and 18-23).

37. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Harrington (US 4,172,824).

38. As stated above Lin teaches films for use in packaging as well as methods for making said films, but however is silent regarding a specific heat seal composition comprising an aromatic dicarboxylic acid, and aliphatic dicarboxylic acid and a glycol.

In regards to claims 18 and 19 Harrington et al. teach a hot melt adhesive compound which comprises terephthalic acid and adipic acid and the glycol component is ethylene glycol (column 2 lines 20-30). Harrington et al. disclose the use of about 60% aromatic dicarboxylic, while the present claims require 55% aromatic dicarboxylic.

It is apparent, however, that the instantly claimed amount of 55% and that taught by Harrington et al. are so close to each other that the fact pattern is similar to the one in In re Woodruff, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where

despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of about 60% disclosed by Harrington and the amount disclosed in the present claims, it therefore would have been obvious to one of ordinary skill in the art that the amount of 55% disclosed in the present claims is but an obvious variant of the amounts disclosed in Harrington et al., and thereby one of ordinary skill in the art would have arrived at the claimed invention.

39. One of ordinary skill in the art at the time of the invention would be motivated to modify the film of Jacques and Lin with the polyester component of Harrington et al. because the polyester component of Harrington et al. offers an excellent softening points and inherent viscosities (column 2 lines 22-33).

40. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Wang et al. (6,143,818).

41. As stated above Jacques and Lin teach films for use in packaging as well as methods for making said films, but however is silent regarding the method of applying an adhesive and using EVOH as an adhesive.

42. In regards to claim 25 Wang et al. teach spray melt blown methods as common methods for applying adhesives (column 1 lines 50-57).

43. In regards to claim 26 Wang et al. teach an adhesive which comprises ethylene vinyl alcohol (claim 11).

44. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Jacques and Lin with the adhesive of Wang et al. because the adhesives of Wang et al. offer improved cohesive strength as well as excellent heat stability (column 3 lines 20-27).

45. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (US 5,114,766) in view of Lin (WO 01/92000) and Zobel (US 5,832,699).

46. As stated above Jacques and Lin teach films for use in packaging as well as methods for making said films, but however is silent regarding cut plants being included in the container.

47. Zobel teaches films which comprise a perforated layer (column 4 lines 1-20).

48. In regards to claims 31 34 and 35 Zobel et al. teach that it is known in the art that films with perforations are used to store vegetables, which are cut plant material (column 3 lines 55-63).

49. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Jacques and Lin with that of Zobel et al. because the invention of Zobel et al. offers an ability to regulate a changing atmosphere in a package (column 1 lines 17-30).

Response to Arguments

50. Applicant's arguments, see arguments, filed 07/13/10, with respect to the previous rejections of the claims have been fully considered but are moot in view of a new grounds of rejection. All applicants' arguments that are still pertinent will be discussed below.

51. In regards to Applicant's arguments regarding the optimization of the ranges, Lin et al. provide motivation for optimizing the density and size of the perforations and the thickness of the layer by teaching that "the final condition of the food can be finely controlled by using different recipes in combination with the number of gaps, shape of the gaps, density of the gaps, distribution of the gaps, film thickness of the packaging bag, starting material of the packaging bag and the material used in the sealing layer" (page 14 lines 23-32). Not only is the process of adjusting each these parameters well known to one of ordinary skill in the prior art, Lin et al. also teach how to adjust some of the parameters such as size and shape of the gaps. It is through this routine optimization that the values in the present claims, including size and density of the gaps, thickness of the layers and WVTR are obtained. It is further noted that now with Jacques et al. as the primary reference all the materials of the various layers are taught and as such they must necessarily have the same WVTR as those instantly claimed.

52. It is noted that with regards to the unperforated barrier layer thickness, Jacques et al. teach that the thickness is as thin as possible and teach a film thickness very

close to applicant's starting point above. It is further noted that the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

53. Examiner notes that while Lin, Rogers, Dominguez, McConnell, Harrington, Wang and Zobel do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow
Examiner
Art Unit 1782

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1782